



AYDIN ADNAN MENDERES UNIVERSITY
KOÇARLI VOCATIONAL SCHOOL
MECHANICAL AND METAL TECHNOLOGY
AGRICULTURAL MACHINERY
COURSE INFORMATION FORM

Course Title	Computer Aided Manufacturing								
Course Code	TAM226			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	Using with G and M cods, CAM programs, over the two-dimensional and three-dimensional drawings, for CNC milling and turning machines, gaining of competence to create tool paths is aimed by this lesson.								
Course Content	CNC milling and turning machines, concept of CAD, introduction to CAD, cutting tools, stock defination, part reset and calibration of tools, programming of CNC turning and milling machines.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Manufactorig Methods and Technology (AYDIN M., GAVAS M., YAŞAR M., ALTUNPARK Y.)
2	CNC Programming with Mastercam X I-II (Prof. Dr. Muammer NALBANT)
3	Lecture Notes (Megep, Makine Teknolojisi, CAM frezeleme ve tornalama)

Week	Weekly Detailed Course Contents	
1	Theoretical	Knowing program interface, importing 2d and 3d cad files. Feedrate and speed calculations.
2	Theoretical	Cutting tools, speed and feedrate calculations. Defining stock parts. Milling options.
3	Theoretical	Face milling.
4	Theoretical	Creating counter tool path.
5	Theoretical	Drilling operations. Creating slot tool paths.
6	Theoretical	Pocket milling. Pool and island operations.
7	Theoretical	Art milling.
8	Intermediate Exam	Midterm exam.
9	Theoretical	High speed face milling.
10	Theoretical	Multi axis milling.
11	Theoretical	introduction to turning, defination of tools and stock, program and bench settings,
12	Theoretical	Rough and finish turning operations.
13	Theoretical	Threading.
14	Theoretical	Drilling, grooving.
15	Theoretical	Drilling, grooving.
16	Theoretical	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Assignment	4	2	0	8
Laboratory	5	0	1	5
Midterm Examination	1	2	1	3



Final Examination	1	2	1	3
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	To be able to gain competence in Computer aided manufacturing for milling. Creating G and M codes manually and using CAM software.
2	To be able to gain competence in computer aided manufacturing for turning. Creating G and M codes manually and using CAM software.

Programme Outcomes (Agricultural Machinery)

1	To be able to comprehend social, cultural and societal responsibility and keep up with national and international up contemporary issues and developments.
2	To be able to be bounded to the Atatürk nationalism, adopted to the national, ethic, spiritual and cultural value of the Turkish Nation, opened to the universal and modern development, adopted the richness, deep seated and productive properties of the Turkish language, having language sympathy and awareness, having reading pleasure and habit and having sufficient foreign language for their vocational necessities, In the directions of the Atatürk Principles and Revolutions,
3	To be able to recognize the basic computer hardware and operating systems , knowledge of internet usage being able to prepare documents, electronic tables and presentation by using office programs.
4	To be able to be aware of ethic responsibility and vocational profession and to have consciousness of a lifelong learning concept
5	To be able to know current vocational issues and to have skill to define and interpret them.
6	To be able to be aware of the universal and social dimensional effects in engineering solutions, and to be able to have knowledge about entrepreneurship and newfangledness.
7	To recognize the materials which used for preparation of agricultural machinery and have skill for the choosing the appropriate material.
8	To be able to acquire the skill of using the necessary tools and equipments which are used in the production and maintenance of agricultural machinery.
9	To be able to prepare the agricultural tools and machineries, to determine the breakdowns and to do periodic maintenance and repairs.
10	To be able to comprehend the picture of the agricultural tools and machinery and their fabrication , and have the skill to draw them via computer.
11	To be able to assemble and to combine machinery pieces by using demountable and nondetachable junction methods.
12	To be able to have the skill of resistance calculations of the agricultural tool and machinery on computer.
13	To be able to test and control the suitability of new machines and mechanic equipment to the definite standarts and technical properties.
14	To be able to have general knowledge of agricultural production.
15	To be able to have knowledge of basic sciences.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2
P3	1	1
P4	3	3
P5	2	2
P6	3	3
P7	1	1
P8	5	5
P9	1	1
P10	3	3
P13	2	2
P15	1	1

